

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

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**NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

(PCT Rule 71.1)

Date of mailing
(day/month/year)

20.12.2004

Applicant's or agent's file reference
A3232.WO195

IMPORTANT NOTIFICATION

International application No.
PCT/IB 03/03177

International filing date (day/month/year)
14.07.2003

Priority date (day/month/year)
25.07.2002

Applicant
AZIONARIA COSTRUZIONI MACCHINE ... et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the International
preliminary examining authority:



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TENT COOPERATION TREATY

PCT

REC'D 23 DEC 2004



INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference A3232.WO195	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA416)	
International application No. PCT/IB 03/03177	International filing date (day/month/year) 14.07.2003	Priority date (day/month/year) 25.07.2002
International Patent Classification (IPC) or both national classification and IPC B31B3/32		
Applicant AZIONARIA COSTRUZIONI MACCHINE ... et al.		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 11 sheets, including this cover sheet.
 - ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the opinion
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☒ Lack of unity of invention
 - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 19.02.2004	Date of completion of this report 20.12.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Johne, O Telephone No. +49 89 2399-7232 

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I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*

Description, Pages

1-14

as originally filed

Claims, Numbers

1-10

as originally filed

Drawings, Sheets

1/5-5/5

as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

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5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

IV. Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees, the applicant has:

- ☐ restricted the claims.
☐ paid additional fees.
☐ paid additional fees under protest.
☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
☒ not complied with for the following reasons:

see separate sheet

4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:

- ☒ all parts.
☐ the parts relating to claims Nos. .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	4-10
	No: Claims	1-3
Inventive step (IS)	Yes: Claims	
	No: Claims	1-10
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations

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see separate sheet

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Re Item IV

1. The separate groups of inventions are:

Group 1, Claims: 1-8

sealing means comprising first and second joining heads

Group 2, Claim: 9

bending a blank around a former

Group 3, Claim : 10

gripper element for the opposite edges of a flattened tubular blank

2. The reasons for which the present application has been deemed to contain 3 inventions which are not linked such that they form a single general inventive concept, as required by Rules 13.1, 13.2 and 13.3 PCT are follows:

3. The prior art has been identified as:

D1: DE-A-3531728

4. The subject-matter of claims 1 to 3 is not new with respect to prior art D1:

4.1. Claim 1:

D1 (the references in parentheses applying to this document) discloses a system for forming containers characterized in that it comprises:

- a first feed station by which a continuous strip (4) of a forming material is directed along a predetermined feed path;
- a main reel (6) rotatable about a relative longitudinal axis, from which the strip (4) is decoilable along the feed path;
- a second feed station (19) supplying a single file of tubular elements (5) generated from the strip;
- sealing means (24) operating on a first open end of each tubular element (5) in such a way as to enclose the selfsame first end (see page 9, line 27 to page 10, line 3);
- a conveying mechanism (20, 21) capable of movement between a first operating position of alignment with the second feed station (19), from which it receives the

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tubular elements (5), and a second operating position in which the tubular elements (5) are positioned in alignment with the sealing means (24); and in that the conveying mechanism (20, 21) comprises at least one wheel rotatable in a given feed direction along a sealing path passing adjacent to the second feed station (19) and the sealing means (24).

Therefore all features of claim 1 are known from D1.

4.2. Claims 2 and 3:

The additional features of dependent claims 2 and 3 are also known from D1 (see fig. 1, ref. no. 20, 21 to claims 2 and 3).

5. Thus, none of the features of claims 1 to 3 can be considered as special technical features.
6. The following (potential) special technical features, which can be seen to make a contribution over the prior art according to document D1, can be identified in the different groups of claims:

- Group 1: the special technical feature of claim 4: sealing means comprising first and second joining heads; the objective problem to be solved by this special technical feature is to be able to unite two opposite sides of the tubular element and to unite the two end folds;

- Group 2: the special technical feature of claim 9: bending a blank around a former; the objective problem to be solved by this special technical feature is to provide a mechanism for forming tubular elements from blanks;

- Group 3: the special technical feature of claim 10: gripper element for the opposite edges of a flattened tubular blank; the objective problem to be solved by this special technical feature is to provide means for expanding flattened tubular blanks to tubular elements with square profile;

Neither the special technical features of the three groups of claims nor the objective problems solved can be regarded as the same or corresponding, so that a technical relationship between the subject-matter of the three groups of claims is lacking, and the requirement for unity of invention referred to in Rule 13 PCT is not

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fulfilled.

Re Item V

Group 1. Claims 1-8:

1. Reference is made to the following documents:

- D1: DE 35 31 728 A (TETRA PAK INT) 20 March 1986 (1986-03-20)
- D2: JP 63 082736 A (DAINIPPON PRINTING CO LTD) 13 April 1988
(1988-04-13)
- D3: CH 413 339 A (CONTINENTAL CAN CO) 15 May 1966 (1966-05-15)

2. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claims 1 to 3 is not new in the sense of Article 33(2) PCT and the subject-matter of claims 4 to 8 does not involve an inventive step in the sense of Article 33(3) PCT.

2.1 Claim 1:

D1 (the references in parentheses applying to this document) discloses a system for forming containers characterized in that it comprises:

- a (first) feed station by which a continuous strip (4) of a forming material is directed along a predetermined feed path;
- a main reel (6) rotatable about a relative longitudinal axis, from which the strip (4) is decoilable along the feed path;
- a (second) feed station (19) supplying a single file of tubular elements (5) generated from the strip;
- sealing means (24) operating on a first open end of each tubular element (5) in such a way as to enclose the selfsame first end (see page 9, line 27 to page 10, line 3);
- a conveying mechanism (20, 21) capable of movement between a first operating position of alignment with the (second) feed station (19), from which it receives the tubular elements (5), and a second operating position in which the tubular elements (5) are positioned in alignment with the sealing means (24); and in that the conveying mechanism (20, 21) comprises at least one wheel rotatable in a given feed direction along a sealing path passing adjacent to the (second) feed

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station (19) and the sealing means (24).

Therefore all features of claim 1 are known from D1.

2.2 Claims 2 to 8:

The additional features of dependent claims 2 to 8 are merely functional design arrangements which are known from the prior art (see D1 fig. 1, ref. no. 20, 21 for claims 2 and 3; D2 figs. 1, 2, 4, 26, 27, 34 and 36 to 40, ref. no. 140, 144, 153, 185, 195, 199, 201, 210, 212, S4, S7-S10 for claims 4 to 8; D3 figs. 1, 2 and 4, ref. no. 27, 27', 28, 28' and page 2, lines 74 to 77 for claim 7).

Consequently, dependent claims 2 to 8 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT with respect to novelty and/or inventive step.

Group 2. Claim 9:

3. Reference is made to the following documents:

D1: DE 35 31 728 A (TETRA PAK INT) 20 March 1986 (1986-03-20)
D4: US-A-5 069 021 (LIEBRAM UDO ET AL) 3 December 1991 (1991-12-03)

4. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 9 does not involve an inventive step in the sense of Article 33(3) PCT.

4.1 The document D4 is regarded as being the closest prior art to the subject-matter of claim 9, and discloses (the references in parentheses applying to this document) a system for forming containers characterized in that it comprises:

- a (first) feed station by which a continuous strip (2) of a forming material is directed along a predetermined feed path;
- a main reel (1) rotatable about a relative longitudinal axis, from which the strip (4) is decoilable along the feed path (see figs 1 and 2);
- a (second) feed station supplying a single file of tubular elements (9) generated from the strip (see column 9, lines 7 to 11);

- means (29) operating on a first open end (44) of each tubular element (9) in such a way as to enclose the selfsame first end (44);
- a conveying mechanism (27) capable of movement between a first operating position (26) of alignment with the (second) feed station, from which it receives the tubular elements (9), and a second operating position (26') in which the tubular elements (9) are positioned in alignment with the enclosing means (29); and in that the conveying mechanism (27) comprises at least one wheel rotatable in a given feed direction (28) along a sealing path passing adjacent to the (second) feed station and the enclosing means (29); wherein
- the tubular elements (9) are prepared by a forming device (8) positioned to coincide with the (second) feed station (see fig. 1) and comprising:
 - a gripper element (69) such as will bend a blank (7) around a former (65) of shape corresponding to the shape of the tubular element (9) in such a way that one longitudinal edge of the blank is made to overlap the other (see fig. 3 and column 12, lines 4 to 16); and
 - a feed mechanism by which the tubular element (9) is advanced along a radial infeed direction (20) toward the conveying mechanism (27) (see column 9, lines 9 to 11).

- 4.2 The subject-matter of claim 9 differs therefrom in that the means for enclosing the first end of the tubular element are sealing means.
- 4.3 Therefore, the problem to be solved by this distinguishing feature may be regarded as to provide tubular elements comprising a folded and sealed first end.
- 4.4 It is common practice in the specific field of making containers for food products to fold and close the first end of tubular elements by sealing means (see for example D1 fig 1, ref. no. 24 and page 9, line 29 to page 10, line 3). The skilled person would therefore regard it as a normal design option to replace the enclosing means of the container forming system described in D4 by sealing means according to D1. Moreover, by this replacement no unexpected technical effect and no surprising effect is achieved.

Consequently, the subject-matter of claim 9 does not involve an inventive step.

Group 3. Claim 10:

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5. Reference is made to the following documents:

D1: DE 35 31 728 A (TETRA PAK INT) 20 March 1986 (1986-03-20)
D5: US-A-4 530 692 (WILLIAMS DONALD H) 23 July 1985 (1985-07-23)

6. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 10 does not involve an inventive step in the sense of Article 33(3) PCT.

6.1 The document D1 is regarded as being the closest prior art to the subject-matter of claim 10, and discloses (the references in parentheses applying to this document) a system for forming containers characterized in that it comprises:

- a (first) feed station by which a continuous strip (4) of a forming material is directed along a predetermined feed path;
- a main reel (6) rotatable about a relative longitudinal axis, from which the strip (4) is decoilable along the feed path;
- a (second) feed station (19) supplying a single file of tubular elements (5) generated from the strip;
- sealing means (24) operating on a first open end of each tubular element (5) in such a way as to enclose the selfsame first end (see page 9, line 27 to page 10, line 3);
- a conveying mechanism (20, 21) capable of movement between a first operating position of alignment with the (second) feed station (19), from which it receives the tubular elements (5), and a second operating position in which the tubular elements (5) are positioned in alignment with the sealing means (24); and in that the conveying mechanism (20, 21) comprises at least one wheel rotatable in a given feed direction along a sealing path passing adjacent to the (second) feed station (19) and the sealing means (24); and
- a forming device (19) positioned to coincide with the (second) feed station (19) for preparing the tubular elements (5) by causing the flattened profile of the blank to expand to a substantially square profile (see page 9, lines 15 to 20).

6.2 The subject-matter of claim 10 differs therefrom in that the forming device comprises a gripper element such as will engage the opposite edges of the flattened tubular blank and thereupon apply a compressive force to the opposite edges.

6.3 Therefore, the problem to be solved by these distinguishing features may be

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regarded as to open a flattened tubular blank to a tubular element having a square profile.

6.4 Opening a flattened tubular blank by (diagonally) applying compressive force to its opposite edges is well known in the specific field of making containers (see for example D5 figs. 2 and 3). Consequently, the skilled person would select this known opening device in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed.

6.5 Hence, the subject-matter of claim 10 does not involve an inventive step.

7. Further remarks:

7.1 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D4 is not mentioned in the description, nor are these documents identified therein.

7.2 The term "feed station" is used for different features (see ref. no. 52a and 4) and therefore leads to unclarity (Article 6 PCT).